



# The Army's Mobility Solution to the Joint Forcible Entry Problem

By Capt. Kyle Wolfley

*To obtain the advantage of an enemy who cannot react because he is surprised and unready, or at least of an enemy who cannot react promptly and in full force, all sorts of paradoxical choices may be justified. Violating commonsense criteria of what is best and most efficient—as the shorter route is preferable to the longer...the bad option may deliberately be chosen in the hope that the unfolding action will not be expected by the enemy...*

-Edward Luttwak, Strategy<sup>1</sup>

Military innovation during long periods of peace has often determined the victors of the next war. Throughout the interwar period of 1919-1939, the major powers experienced mixed results with developing the technology, doctrine, and organization to overcome the attritional style of warfare that defined World War I. The strategic, political, and organizational climate of each country either provided the breeding ground for revolutionary ideas or established enough obstacles to inhibit innovation.<sup>2</sup> The United States today is faced with a similar task to develop the strategy and technology to address challenging future threats. The US Air Force and Navy, through their joint Air-Sea Battle Operational Concept, have developed a framework for defeating the Anti-Access/Area Denial threat posed by potential adversaries. Although this concept provides a solution to ensure access to the global commons, the US also needs to retain the ability to seize terrain to achieve decisive results in war.

The US Army also developed a framework for how to defeat a distant adversary that employs air defense systems. Known as Joint Forcible Entry (JFE), this concept is designed to move a land power by its air force across continents to conduct a parachute or air-land assault to seize and hold terrain. However, the JFE concept essentially calls for an operational penetration into an enemy's air defense; what the US needs is an operational envelopment that allows its airpower to avoid primary air defenses and deliver its land power alongside the flank or behind the entrenched enemy position.

The JFE concept calls for a penetration due to the limited mobility an airborne force traditionally brings to bear once it hits the ground. Because of this limitation, the force must essentially land on top or near its objective (such as an airfield or airport). Thus, in order to avoid the attrition that would ensue by delivering an airborne force directly into enemy air defenses, the US Army needs to provide its immobile forces the ability to be mobile on land.

A new air-droppable Light Tactical All Terrain Vehicle (LTATV) offers the Joint Force the ability to conduct an operational envelopment, avoid the enemy's principle air defenses, and seize ground objectives. Similar to how the armored tank answered the question of how to defeat attritional warfare after World War I, the LTATV may provide the ability to conduct JFE against opponents with major air defense systems.

## The Tank and Blitzkrieg Respond to Attrition

For all the combatants in World War I, attrition was the style of warfare that dominated every campaign. The attritional strategy is predicated on the use of overwhelming firepower (as opposed to maneuver) to defeat a defensive opponent in multiple set-piece battles. A successful offense would essentially serve as a steamroller to push back the defender across a broad front to weaken his defense.<sup>3</sup> Battles are assumed to be high in number and victories slow to achieve. Heavy use of artillery and attacking shallowly into an enemy's defenses are the hallmarks of attritional strategies.



In 1916, J.F.C. Fuller, a British Military officer who recently joined the British Tank Corps, observed that the newly developed armored tank employed in attritional battles such as the Somme was not reaching its full potential.<sup>4</sup> As a means to break through the German entrenched defense known as the Siegfried Line in 1918, Fuller developed an operational plan known as “Plan 1919” that envisaged thousands of tanks breaking through enemy lines to disrupt the German high command. As opposed to exchanging gunfire across the trenches, he imagined that the highly mobile and protected tank would deliver a deep penetration into the enemy’s rear. However, Fuller’s plan never saw the battlefield as the armistice preceded the mass production of tanks. Yet his imagination to use the tank to maneuver through and around the enemy, strike his rear, and disorganize his command and control structure was revolutionary.<sup>5</sup>

Following World War I, military theorists debated the possible doctrines that should be developed in planning for the next war. The tank, though pivotal to Fuller’s concept of a deep penetration, did not hold the same level of importance for everyone and three general schools of thought emerged. In the first, the tank would be employed to provide infantry support with little regard to extended mobility, similar to its use during WWI. The second school argued that tanks should be employed like horse cavalry to exploit battlefield success earned by infantry and artillery. The third theory held that the tank had the potential to be revolutionary by becoming the chief weapon on the battlefield; by using maneuver and protection instead of mere stationary firepower, the tank could change the ways wars were fought.<sup>6</sup>

The last school of thought paved the way for blitzkrieg, an operational concept that served as a response to the attritional style of warfare by effecting a deep penetration quickly and decisively, severing lines of communication, and destroying an army’s ability to command using mobility and maneuver.<sup>7</sup> The aim was to avoid a broad frontal attack by massing at a specific point, usually an enemy’s rear or flank, and staying clear of his most formidable defenses. Thus, the attacking force would not require total superior numbers, only a stronger force at the concentrated area.

In the 1930’s the German Army developed and implemented blitzkrieg by drawing on the lessons of the March 1918 Offensive. During that campaign, the Germans introduced infiltration tactics, which attempted to enact the same goals as blitzkrieg by concentrating at a weak Allied flank to access its command and logistics nodes. Yet without tanks the German Army was inhibited by its lack of mobility. As John J. Mearsheimer explains:

After spectacular initial success, the German offensive failed, in large part because the Germans did not have the means to exploit their opening success. Foot soldiers were not able to reach deep enough into the enemy’s rear before the Allies shifted their forces and contained the penetration.<sup>8</sup>

After using the interwar period to develop not only faster and more lethal tanks but also new doctrine, the Germans showcased blitzkrieg in the opening salvo of WWII, providing a devastating penetration against the French in 1940.<sup>9</sup>

### **The Potential for Attrition Today**

Today’s environment has seen the proliferation of various types of air defense weapons that could be used to thwart US access to key terrain. Air defense can take many shapes and ranges: on the tactical end, soldiers can fire shoulder-launched, Man-Portable Air Defense Systems (MANPADs) such as SA-7s or Stingers that were used by the Afghan Mujahedeen against low-flying Soviet aircraft in the 1980’s.<sup>10</sup> At the strategic level, major mounted systems such as the new S-400 Triumf can fire missiles at aircraft within 250 miles.<sup>11</sup>

Air defense weapons are used by both non-state actors and great powers, many of which employ a defensive concept that prevents other militaries from invading their airspace or shores. This concept is usually referred to Anti-Access/Area Denial (A2AD), an integrated defensive posture thought to be employed by China and



Russia.<sup>12</sup> Anti-Access refers to defensive actions that prevent or degrade a military's ability to enter an operational area and include more than just air defense weapons. Examples of anti-access measures include surface ships or submarines that can attack warships up to 1,000 miles offshore; long-range anti-ship ballistic and cruise missiles; air defenses capable of destroying aircraft over 100 km; and long-range strike aircraft. Area denial describes the threats to forces within an operational area and include shorter-range capabilities, such as MANPADs, anti-aircraft guns with a range of 10,000 feet, or anti-tank guided missiles.<sup>13</sup>

A2/AD is an operational concept that is available to forces spanning the entire spectrum of conflict, from state actors to hybrid or irregular forces. States can employ surface-to-air-missiles (SAMs), warships, or long-range strike aircrafts while insurgents can be effective with aged anti-aircraft artillery, rocket-propelled grenades, or other inexpensive MANPADs.<sup>14</sup> The 2012 US Joint Operational Access Concept (JOAC) recognizes the A2AD threat around the globe, citing it as, "one of the most difficult that joint forces will face in coming decades."<sup>15</sup> The publication acknowledges the challenges in overcoming these defensive capabilities: "Advancing across open oceans and through open airspace to overcome prepared defenses is by nature a very challenging form of warfare, tending to impose higher-than-normal losses on the attacker, and therefore requiring the resolve to absorb those losses."<sup>16</sup>

By restricting access by land, air, or sea to a country's operational area, militaries can essentially halt an invading army at its periphery, as the WWI German Siegfried Line accomplished until September 1918. In order to defeat the modern defensive line and avoid the resultant attrition that would ensue, the US will need not only the ability to bypass the contemporary air defense "trench" but also be mobile and expansive in the enemy's rear.

### **Joint Forcible Entry and its Ground Mobility Limitation**

The US Joint Forcible Entry (JFE) operational concept is the joint force's answer to the A2AD threat. JFE operations are defined as the ability to seize and hold lodgments against armed opposition.<sup>17</sup> More specifically, the US Army would provide an airborne force to execute a parachute assault into a denied area, seize a lodgment (airhead, or an aircraft landing zone), and then build-up combat power through the air-landing of subsequent light or heavy forces. Because the airborne force is light by design (using fewer vehicles than a mechanized or armor unit), the ground force must be air-dropped or air-landed either on top of or near the lodgment site. If the ground force were dropped farther from the air-land site, it would require more time to seize the lodgment, allowing the enemy to reposition and establish a more effective defense.

Though JFE promises to achieve a penetration by delivering an airborne force deep into enemy territory, there are two problems with this concept. First, as the air force approaches an adversary's anti-access systems (long-range), it has the potential to be targeted and destroyed by cruise or ballistic missiles. Second, even if it passes through these major systems, it has to contend with area-denial measures (short-range) such as MANPADs, because it must drop the airborne forces directly over the airfield. Even the JOAC publication expresses concern for this type of risky operation: "In contrast, large land forces generally will be the last to penetrate within range of an enemy's anti-access and area-denial weapons because of the potential for catastrophic loss."<sup>18</sup> In order to bypass these defenses and avoid the potential for the aircraft to be destroyed, the land force will need long-range ground mobility.

Some key contrasts between the experiences of interwar Germany and the contemporary US are necessary to highlight in order to truly understand the inherent risk in a JFE that lacks ground mobility. The German infiltration tactics of 1918 failed to deliver a quick, deep penetration due to a lack of mobility. On the other hand, the US JFE provides the means to penetrate deeply into enemy territory, yet it must expose itself to air defenses due to a lack of ground mobility once troops exit the aircraft. Even if pre-assault strikes by air force bombers or naval cruisers are able to suppress identified air defenses before an airborne operation commences, there is still substantial risk, explicitly stated in the JOAC:



The concept's reliance on deep, precise strikes to neutralize enemy antiaccess and area-denial weapons before they can inflict significant losses may be unrealistic in the time frame of the concept. Locating, targeting and defeating such systems effectively from a distance remains a very difficult challenge, from the perspectives of both target intelligence and weaponeering. If such hostile systems cannot be neutralized, the successful execution of the concept could be at risk.<sup>19</sup>

Additionally, the Germans were able to employ tanks in a blitzkrieg to avoid the French defensive Maginot Line and drive through Belgium, the Netherlands, and the Ardennes Forest in the 1940 Battle of France. Conversely, the US would be forced to fly aircraft loaded with airborne troops to directly confront air defense weapons near airfields. The US should learn from the success of German blitzkrieg in WWII and provide the air force the option to circumvent the modern trench line by dropping paratroopers or air-landing far from the protected objective airhead.

### **The Mobility Solution to Overcome Attrition**

The Light Tactical All Terrain Vehicle (LTATV)<sup>20</sup> is a general term for the class of vehicles the Army is considering to help solve the JFE problem. The ideal LTATV would have the following characteristics: lightweight, air-transportable, modular, ruggedly dependable, and logistically conservative. Concerning transportability, a 2015 Rand study describes the qualities of an LTATV as the ability to be internally transported or sling-loaded by a helicopter and air-droppable from a transport aircraft.<sup>21</sup> An LTATV should be able to move at least an infantry fire team, inherit the logistical and mechanical capacity to move long distances over challenging terrain without substantial maintenance requirements, and be modular enough to modify for various mission sets. Current LTATV models range from four- to nine-seat variants and appear similar to civilian 4-wheelers.

What the LTATV provides is the ability to travel long distances on the ground over rough terrain to reach a distant objective. Thus, instead of the aircraft flying directly into both major and minor air defenses weapons en-route to and near the objective, the air force could move around these systems and land or drop paratroopers unexposed away from the objective.

A company's, battalion's, or brigade's worth of LTATVs could be dropped onto an off-set drop zone that is far from the objective, allowing the ground force to consolidate, build combat power, and then flank the enemy from an unexpected position. Thus, as the enemy prepares its defenses against a frontal attack or penetration, it is caught off-guard by the flanking force. The ground force would then be able to seize the objective from a surprise avenue, neutralize previously unidentified enemy air defense weapons (thus protecting subsequent aircraft), and destroy command and logistics nodes.

The LTATV would provide better probability of success in JFE for three main reasons. First, the light vehicle concept would allow the joint force to achieve surprise, one of the principles for JFE operational success.<sup>22</sup> If an enemy determines that a certain airport or airfield is key terrain, that enemy will most likely establish strong defenses (ranging from major SAMs to minor, but nevertheless devastating, MANPADs) around those strategic sites. The LTATV would allow the ground force to be dropped by the flank or behind the enemy, establish a relative position of advantage, and seize the initiative.

Second, using light vehicles would provide planners more options in selecting target sites. Instead of thinking in terms of how many single-digit kilometers a dismounted ground force could be air-dropped from the lodgment area, planners could imagine more stand-off from better protected areas farther from the objective. If an enemy has to plan for not only a penetration straight to his airfield but also the possibility of being flanked by any side, he will be forced to spread his forces and create holes in his defenses.

Third, light mobility would allow the land force greater opportunity to attack and destroy area-denial systems that are out of reach for the air force or navy. Certain low-altitude air defenses are able to remain passive





with their radars turned off until they are ready to engage their targets, preventing aircraft or warships from identifying and destroying them in advance of an assault.<sup>23</sup> In 1999 during Operation Allied Force in Kosovo, air commanders were never sure whether the SA-6 MANPADS operating inside the country had been eliminated because of successful Serbian efforts to hide them.<sup>24</sup> The land force's ability to locate and defeat these concealed systems is a key component of operational access; the probability of success is greatly increased when the land force has the mobility to maneuver on these systems, protecting the joint force in general.

Of course, the LTATV program is in its infancy and is currently being tested to determine its constraints. The major concerns are the amount of non-organic logistics and maintenance required and the light, unarmored personnel carrier's vulnerabilities. However, it should be noted that the LTATV would not serve as a fighting vehicle or mounted weapons platform. It would be used to transport soldiers short of an objective who would otherwise be walking under load to their destination. Thus, the LTATV is more of a mobility rather than a maneuver platform.

Moreover, LTATVs provide more mobility options: instead of being canalized into roads laden with mines or improvised explosive devices, LTATVs could be used to avoid traditional mobility corridors and move over restricted terrain. The tactical risks are certainly present, yet the operational risks of conducting an airborne operation into sophisticated air defenses and onto a well-defended key objective are unacceptable.

JFE is an important concept that will be vital in any upcoming major confrontation, whether used as a deterrent against aggression, a means to re-assure allies, or a capability to seize terrain to provide decisive results for the joint force. Yet the US Army needs to further develop this concept by providing a means to flank the enemy with surprise, allowing the air force the option to bypass primary enemy air defense systems. The JOAC:

...envisions that joint forces will attempt to penetrate into the depth of an enemy's antiaccess/area-denial defenses...they naturally will take advantage of any identified gaps in the enemy defenses. The penetration is designed to disrupt the integrity of the enemy defensive system, the preferred defeat mechanism, by striking at critical hostile elements...<sup>25</sup>

In order to realize the end-state of the JOAC, the US Army must incorporate the LTATV into JFE, thus providing the means to avoid enemy anti-access measures, envelop the enemy, destroy unsuppressed or unidentified air defenses, and seize ground objectives.

*Captain Kyle Wolfley, U.S. Army, is currently the company commander for HHC/1-325 AIR/2nd BCT/82nd Airborne Division. He previously commanded B/1-325 AIR/2nd BCT/28th Airborne Division and deployed to Afghanistan as a rifle platoon and company executive officer in the 172nd Infantry Brigade. He holds a B.S. from the United States Military Academy.*

## NOTES

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